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APPLICATION NO.	FILING DATE .	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,803	10/20/2000	Rene Gerrit Heideman	080743/Universiteit	8677

7590  
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12/17/2004

EXAMINER
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KANG, JULIANA K

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/693,803

**Applicant(s)**

HEIDEMAN ET AL.

**Examiner**

Juliana K. Kang

**Art Unit**

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14, 15, 20, 24 and 26-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15, 20, 24, 33-37, 39-42 and 44-48 is/are allowed.
- 6) ☒ Claim(s) 32, 38 and 43 is/are rejected.
- 7) ☒ Claim(s) 26-31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Applicant's communication filed on 9/17/04 has been carefully studied by the Examiner. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.**

***Allowable Subject Matter***

2. Claims 14, 15, 20, 24, 33-37, 39-42, and 44-48 are allowed.

The statement of reasons for the indication of allowable subject matter for claims 14, 15 and 20 are indicated during the previous Office action.

3. Claims 26-31 would be allowable if rewritten or amended to overcome the object set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 24 and 48, there is no prior art that teaches or reasonably suggests the claimed optical lightguide device with all the specific elements and the specific combinations including a series of two types of segments spaced in a non-periodic manner that is determined by the electrode pattern as set forth in claim 24 and 48.

Regarding claims 26-31, there is no prior art that teaches or reasonably suggests the claimed integrated optical device with all the specific elements and the specific combinations including the third structure having a plurality of first and second segments wherein the refractive index of first and second segments are different and the each length of the first segments are not equal as set forth in claim 26.

Regarding claim 33, there is no prior art that teaches or reasonably suggests the claimed integrated optical lightguide with all the specific elements and the specific combinations including a strip of sensitive material having alternating non-periodic first and second segments wherein the second segments are formed by desensitizing as set forth in claim 33.

Regarding claim 34, there is no prior art that teaches or reasonably suggests the claimed integrated optical lightguide with all the specific elements and the specific combinations including a ridge structure having a series of alternating non-periodic segments of sensitive and desensitized material as set forth in claim 34.

Regarding claim 35, there is no prior art that teaches or reasonably suggests the claimed integrated optical lightguide with all the specific elements and the specific combinations including the active segment that changes the refractive index to match the non-sensitive material segment when a parameter is sensed as set forth in claim 35.

Regarding claim 36, there is no prior art that teaches or reasonably suggests the claimed integrated optical lightguide with all the specific elements and the specific combinations including alternating two segments S1 and S2 wherein the refractive index of segments S1 and S2 are changed by different parameters as set forth in claim 36.

Regarding claim 37, there is no prior art that teaches or reasonably suggests the claimed method for measuring with all the specific elements and the specific combinations including forming a non-periodic distribution of different types of segments as set forth in claim 37.

Regarding claims 39-41 and 44-46, there is no prior art that teaches or reasonably suggests the claimed method for measuring with all the specific elements and the specific combinations including desensitizing a series of spaced apart segments to form alternating non-periodic sensitive and desensitized segments as set forth in claims 39-41 and 44-46.

Regarding claims 42 and 47, there is no prior art that teaches or reasonably suggests the claimed method for measuring with all the specific elements and the specific combinations including forming tow types of segments S1 and S2 and activating S2 as set forth claims 42 and 47

#### ***Claim Objections***

4. Claims 26-41 are objected to because of the following informalities: claim 26 recites the limitation "said light path" in line 3. Since a light path in line 2 is deleted there is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

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Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claim 32, 38 and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakai et al (U.S. Patent 5,930,437).

Nakai et al disclose an integrated optical device comprising a first structure (14d) and a second structure (10) with a plurality of first segment (12a) and a plurality of second segment (12b) (see Fig. 4A and 4B) wherein the first segment and the second segment differ in lateral widths.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 32, 38 and 42 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

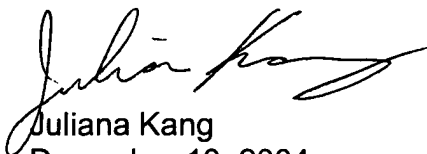
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Juliana Kang  
December 10, 2004